General

Guideline Title

Role of EUS for the evaluation of mediastinal adenopathy.

Bibliographic Source(s)

ASGE Standards of Practice Committee, Jue TL, Sharaf RN, Appalaneni V, Anderson MA, Ben-Menachem T, Decker GA, Fanelli RD, Fukami N, Ikenberry SO, Jain R, Khan KM, Krinsky ML, Malpas PM, Maple JT, Fisher D, Hwang JH, Early D, Evans JA, Dominitz JA. Role of EUS for the evaluation of mediastinal adenopathy. Gastrointest Endosc. 2011 Aug;74(2):239-45. [104 references] PubMed

Guideline Status

This is the current release of the guideline.

This release updates a previously published guideline: Jacobson BC, Hirota WK, Goldstein JL, Leighton JA, Mallery JS, Waring JP, Baron TH, Faigel DO. The role of EUS for evaluation of mediastinal adenopathy. Gastrointest Endosc 2003 Dec;58(6):819-21. [24 references]

Recommendations

Major Recommendations

Definitions for the quality of the evidence (++++, +++O, ++OO, and +OOO) and for the strength of the recommendations ("recommends" or "suggests") are provided at the end of the "Major Recommendations" field.

1. In patients with known or suspected potentially resectable lung cancer whose imaging reveals mediastinal adenopathy, the Practice Committee suggests that endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) be performed in patients with paraesophageal, posterior, and inferior mediastinal adenopathy, if the expertise if available. (++OO) Similarly, the Practice Committee suggests that endobronchial ultrasound-guided fine-needle aspiration (EBUS-FNA) be performed in patients with paratracheal mediastinal adenopathy if this information adds to the staging of the lung cancer. (++OO) EUS-FNA and EBUS-FNA have been shown to be safe, and potentially cost-effective compared with mediastinoscopy, although individually each has a high false-negative rate that warrants surgical confirmation before proceeding with resection.
2. In patients with known or suspected potentially resectable lung cancer whose imaging shows no evidence of mediastinal adenopathy, the Practice Committee suggests combined EUS-FNA/EBUS-FNA for staging. (++OO) Combined EUS-FNA/EBUS-FNA has been shown to have a negative predictive value comparable to that of mediastinoscopy. However, expertise in both modalities is not readily available at most institutions.
3. In patients who require evaluation of station 5 nodes, the Practice Committee suggests EUS-FNA as a safe and cost-effective first-line approach. (++OO)
4. When EUS-FNA is performed for suspected lymphoma, the Practice Committee suggests that specimens be sent for flow cytometry and, if

technically possible, that EUS core biopsy specimens be obtained because immunophenotyping and histology are often required for diagnosis and subtyping of lymphoma. (++OO)

5. When EUS-FNA of mediastinal adenopathy is performed in patients with suspected infected nodes, the Practice Committee recommends that aspirate be sent for special stain and culture (e.g., acid-fast stain, fungal culture). (+OOO)

Definitions:

Grading of Recommendations Assessment, Development, and Evaluation (GRADE) System for Rating the Quality of Evidence for Guidelines

Quality of Evidence	Definition	Symbol
High Quality	Further research is very unlikely to change confidence in the estimate of effect	++++
Moderate Quality	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate	+++O
Low Quality	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate	++OO
Very Low Quality	Any estimate of effect is very uncertain	+OOO

Adapted from Guyatt GH, Oxman AD, Vist GE, et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ 2008;336:924-6.

Recommendation Strength

The strength of individual recommendations is based both on the aggregate evidence quality and an assessment of the anticipated benefits and harms. Weaker recommendations are indicated by phrases such as "the Practice Committee suggests," whereas stronger recommendations are typically stated as "the Practice Committee recommends."

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Mediastinal adenopathy

Guideline Category

Diagnosis

Evaluation

Clinical Specialty

Gastroenterology

Internal Medicine

Oncology

Intended Users

Physicians

Guideline Objective(s)

To address the role of endoscopic ultrasound (EUS) and endobronchial ultrasound (EBUS) in the evaluation of mediastinal adenopathy

Target Population

Patients with known or suspected mediastinal adenopathy

Interventions and Practices Considered

Diagnosis/Evaluation

1. Endoscopic ultrasound-guided fine needle aspiration (EUS-FNA)
2. Endobronchial ultrasound-guided (EBUS)-FNA
3. Tissue assessment
    - Flow cytometry
    - Special stain and culture

Major Outcomes Considered

- Sensitivity, specificity, accuracy, and negative predictive value of diagnostic tests
- Cost-effectiveness of diagnostic tests

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

In preparing this guideline, a search of the medical literature was performed using PubMed. Additional references were obtained from the bibliographies of the identified articles and from recommendations of expert consultants. When few or no data exist from well-designed prospective trials, emphasis is placed on results from large series and reports from recognized experts. The updated literature time frame is 1990 to 2011.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Grading of Recommendations Assessment, Development, and Evaluation (GRADE) System for Rating the Quality of Evidence for Guidelines

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Methods Used to Analyze the Evidence

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Guidelines for appropriate use of endoscopy are based on a critical review of the available data and expert consensus at the time that the guidelines are drafted.

Rating Scheme for the Strength of the Recommendations

The strength of individual recommendations is based both on the aggregate evidence quality and an assessment of the anticipated benefits and harms. Weaker recommendations are indicated by phrases such as "The Practice Committee suggests," whereas stronger recommendations are typically stated as "The Practice Committee recommends."

Cost Analysis

Cost analyses compared endoscopic ultrasound-guided fine needle aspiration (EUS-FNA), endobronchial ultrasound-guided fine-needle

aspiration (EBUS-FNA), and combined EUS/EBUS-FNA with mediastinoscopy in the evaluation of mediastinal adenopathy with suspected lung cancer. One study suggested that EUS-FNA is more cost-effective than mediastinoscopy, provided that the location of potential mediastinal metastases is in station 5, 6, or 7. A second study determined that EUS-FNA was more cost-effective than mediastinoscopy, but assumes that EUS-FNA always successfully detects and samples the abnormal node on computed tomography (CT) scan and that 50% of mediastinoscopies are performed on an inpatient basis. A third study determined that EUS-FNA is most cost-effective if the probability of lymph node metastases is less than 32%; above this, combined EUS and EBUS are preferred. However, the study also assumes that 50% of mediastinoscopies are performed on an inpatient basis.

Method of Guideline Validation

Not stated

Description of Method of Guideline Validation

Not applicable

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate use of endoscopic ultrasound (EUS) and endobronchial ultrasound (EBUS) for evaluation of mediastinal adenopathy

Potential Harms

- Systematic reviews of endobronchial ultrasound (EBUS) with fine needle aspiration (FNA) report major complication rates as high as 0.05%, including pneumothorax and respiratory failure requiring ventilation.
- Endoscopic ultrasound fine needle aspiration (EUS-FNA) of lymph nodes in the mediastinum performed in patients with suspected lung cancer has a complication rate of 0.2%.

Qualifying Statements

Qualifying Statements

- Further controlled clinical studies may be needed to clarify aspects of this guideline. This guideline may be revised as necessary to account for changes in technology, new data, or other aspects of clinical practice.
- This guideline is intended to be an educational device to provide information that may assist endoscopists in providing care to patients. This guideline is not a rule and should not be construed as establishing a legal standard of care or as encouraging, advocating, requiring, or discouraging any particular treatment. Clinical decisions in any particular case involve a complex analysis of the patient's condition and available courses of action. Therefore, clinical considerations may lead an endoscopist to take a course of action that varies from these guidelines.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Staff Training/Competency Material

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2003 Dec (revised 2011 Aug)

Guideline Developer(s)

American Society for Gastrointestinal Endoscopy - Medical Specialty Society

Source(s) of Funding

American Society for Gastrointestinal Endoscopy

Guideline Committee

Standards of Practice Committee

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

The following authors disclosed financial relationships relevant to this publication:

Dr Decker: consultant to Facet Biotechnology; Dr Fanelli: honoraria from Ethicon, consultant to RTI; owner/governor: New Wave Surgical Corp; Dr Jain: research support from Barrx; Dr Evans: consultant to Cook Medical. The other authors disclosed no financial relationships relevant to this publication.

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Guideline Availability

Electronic copies: Available from the American Society for Gastrointestinal Endoscopy Web site .

Print copies: Available from the American Society for Gastrointestinal Endoscopy, 1520 Kensington Road, Suite 202, Oak Brook, IL 60523

Availability of Companion Documents

The following is available:

- Role of EUS for the evaluation of mediastinal adenopathy. CME course. Available from the American Society for Gastrointestinal Endoscopy Web site .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI on October 15, 2004. The information was verified by the guideline developer on November 5, 2004. This NGC summary was updated by ECRI Institute on September 14, 2012.

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